

Claim List

1-25 (cancelled)

26. (currently amended) A system for scanning tissue comprising:
a light source for producing an illumination beam; and
optics for scanning and focusing said illumination beam into tissue and receiving
returned illumination from the tissue in which the illumination beam and returned
illumination are cross polarized with respect to each other inside the tissue, wherein said
returned illumination when imaged represents a section of said tissue.

27. (currently amended) A The system according to Claim 26 for scanning tissue
comprising:

a light source for producing an illumination beam; and
optics for scanning and focusing said illumination beam into tissue and receiving
returned illumination from the tissue in which the illumination beam and returned
illumination are cross polarized with respect to each other, wherein said returned
illumination when imaged represents a section of said tissue, wherein said tissue is
located in a solution which enhances brightness of one or more tissue structures in said
returned illumination representing at least one section of said tissue.

28. (previously presented) The system according to Claim 27 wherein said
solution has an acid component.

29. (previously presented) The system according to Claim 28 wherein said acid
component is one of acetic acid or vinegar.

30. (currently amended) The system according to Claim 26 further comprising a
container with means for placing said the tissue under tension against a surface through
which said optics scans said tissue with said illumination beam.

31. (previously presented) The system according to Claim 26 further comprising
a detector which receives said returned illumination and forms an image representing said
section of said tissue.

32. (previously presented) The system according to Claim 26 wherein said optics are part of a confocal microscope.

33. (currently amended) A system for providing enhanced images of tissue comprising:

means for optically forming an a reflected image representing a section of tissue utilizing light of different polarization in the illumination of the tissue and in the detection of light from the tissue; and

an image enhancing agent provided to said tissue which at least changes the light scattering property of the tissue to enhance tissue structures in said image.

34. (previously presented) The system according to Claim 33 wherein said enhancement of said image is in accordance with said light of said different polarization in the illumination of tissue and detection of light from said tissue.

35. (currently amended) A The system according to Claim 33 for providing enhanced images of tissue comprising:

means for optically forming an image representing a section of tissue utilizing light of different polarization in the illumination of the tissue and in the detection of light from the tissue; and

an image enhancing agent provided to said tissue to enhance tissue structures in said image, wherein said image enhancing agent has an acid component.

36. (previously presented) The system according to Claim ~~33~~ 35 wherein said acid component is one of acetic acid or vinegar.

37. (previously presented) A method for scanning tissue comprising the steps of:
generating an illumination beam;
scanning the beam to tissue;
receiving returned light from the tissue representing at least one section of the tissue;

controlling the polarization of the illumination beam and the returned light;

detecting the returned light to form an image of the section of the tissue; and
providing an agent to said tissue which enhances the brightness of one or more
tissue structures in said image.

38. (previously presented) The method according to Claim 37 wherein said agent
has an acid component.

39. (previously presented) The method according to Claim 38 wherein said acid
component is one of acetic acid or vinegar.

40. (previously presented) The method according to Claim 37 wherein said
polarization controlling step further comprises the step of changing polarization state of
at least one of the illumination beam and the returned light to effect characteristics of
tissue structures in the image of the tissue section to enable determination of which of the
tissue structures are cancerous.

41. (currently amended) A method for detecting cancerous cells in images
comprising the steps of:

washing the tissue to be imaged in a solution which will enhance brightness of
nuclei in images;

illuminating the tissue with light of a first polarization;

collecting returned light from the tissue of a second polarization;

detecting said collected returned light to form one or more images representing a
section of the tissue; and

adjusting one or more of said first polarization and said second polarization to
change the collected light scattered from the nuclei in said images.

42. (previously presented) The method according to Claim 41 wherein said
solution has an acid component.

43. (previously presented) The method according to Claim 42 wherein said acid
component is one of acetic acid or vinegar.

44. (new) An image enhancing agent comprising an acid component which when applied to tissue at least changes the scattering property of the tissue to enhance contrast of the tissue when illuminated with light of a first polarization and detected with light of a second polarization different from said first polarization.